

Notice of Allowability	Application No.	Applicant(s)	
	09/725,081	UMEDA ET AL.	
	Examiner	Art Unit	
	Pedro J. Cuevas	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on May 22, 2003.
2. ☒ The allowed claim(s) is/are 1-4 and 6-22.
3. ☒ The drawings filed on 29 November 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____. |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____. | 6 <input type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other _____. |

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-4, and 6-22 are allowed.
2. The following is an examiner's statement of reasons for allowance.

Kitamura et al. discloses a liquid-cooled vehicle rotary electric machine operable in a motor mode or a generator mode comprising:

a frame having an inner periphery, an outer periphery and a liquid passage that is disposed between said inner periphery and outer periphery;

a stator core having an outer periphery fixedly fitted to said inner periphery of said frame, opposite core ends and a plurality of slots;

a multi-phase stator winding accommodated in said plurality of slots; and

a rotor rotatably supported by said frame and disposed inside said stator core so as to electro-magnetically connect said stator core.

Umeda et al. (5,965,965) teaches the construction of a vehicle rotary electric machine wherein:

a stator winding comprises a plurality of insulated U-shaped conductor segments, each of which has a pair of legs, each of which is inserted in a slot and connected to another at one of said core ends to form a joint coil end, wherein said liquid passage is disposed near said joint coil end;

said rotor has a plurality of magnetic poles alternately disposed at prescribed intervals in the circumferential direction thereof;

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the number of said slots is larger than two times as many as the product of the number of said magnetic poles and the number of the phase of said stator; and a space is defined between adjacent conductor segments at said joint coil end, for the purpose of providing an improved structure of coil ends of the stator and rotor which provides high cooling performance with low noise, and does not require the addition of any parts.

Umeda et al. (6,137,201) teaches the construction of a vehicle rotary electric machine wherein said plurality of slots are disposed in said stator to increase contact area of said U-shaped conductor segments with slot inner walls and said liquid passage is disposed near said joint coil end.

Guru et al. teach that the stator winding current required by any electromechanical device is larger when used as a motor, than the stator winding current supplied by the device when used as a generator, due to the losses of the magnetic circuit.

The prior art of record, taken alone or in combination, fails to teach the construction of a liquid-cooled vehicle rotary electric machine operable in a motor mode or a generator mode as described on independent claims 1 and 10, wherein said stator winding has a plurality of conductor segments extending in a circumference around the turn portions of said U-shaped segments to be welded together to form a neutral point.

Dependent claims 2-4, 6-9, and 11-22 are considered allowable by their respective dependence on allowed independent claims 1 and 10.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

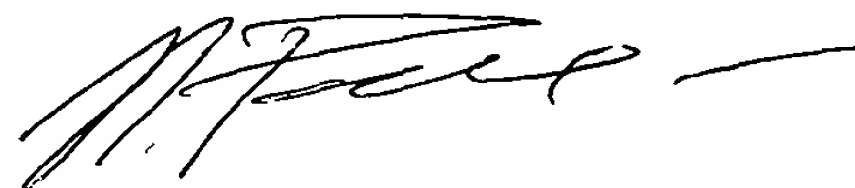
3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramírez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas
July 16, 2003



Nicholas Ponomarenko
Primary Examiner
Technology Center 2800